Resource Access
Purchase and use technologies on a planned basis that considers evolving and new technologies.

Strategies:
- Update technology plan models to include evolving technologies.
- Implement plan for maintaining and updating equipment.

Infusion
Synchronize business, community and school use of computers and other technologies.

Strategies:
- Create two-way communication structure between business and schools.
- Align school technology studies with business needs.
- Provide for articulation of technology resources and purposes between businesses and schools.
- Develop collaboration between curriculum people and technology people to identify and develop appropriate software.
- Increase awareness of available software packages/resources.
- Provide software to meet curricular needs of students.

Supervision
Provide adequate supervision of technology use at the classroom, school, area and district-wide levels.

Strategies:
- Provide technology training for supervisors.
- Provide time for supervisors to monitor use of technology.
- Establish organizational structure for supervision of technology use.

Professional Development
Use in-building and in-district technology specialists for professional development.

Strategies:
- Establish technology competencies of in-building and in-district technology specialists.
- Provide structure for using in-building and in-district technology specialists.

Information Management

Objective:

To develop an information management system that provides quality data and timely information.

Recommendations:

Ease of Use

Establish procedures to evaluate software and hardware that include the aspect of user interface and user friendliness as major factors in choices made for acceptance by the district.

Strategies:

- Create a beta evaluation team to review all technology products in consideration for use by DPS.
- Establish a formal mechanism for evaluation and feedback by the use community after the release of any products.
- Establish guidelines for what is currently "user friendly".

Integrated Information

Consolidate all information and make it available to all who qualify for its access.

Strategies:

- Adopt a relational database platform adequate to handle the total information needs of the district.
- Deploy LAN based network to entire district.
- Adopt user based applications that can easily skew information and produce ad hoc reports on demand.

Instructional Management

Implement a district-wide instructional management process to enable the correlation of student progress, curriculum objectives and use of resources.

Strategies:

- Make district-wide modifications based on needs identified in the existing pilot.
- Assure that the student database can be accessed by all teachers of the student to allow on site recording of objective mastery.
- Place all current core objectives on the district's computer network.
- Maintain up-to-date objective supporting resources on the district's computer network.

Human Resource Management
Implement a human resource system that will handle the needs of our staff as it changes with the technological advances of the district.

Strategies:
- Locate a human resource system that can be implemented on existing platforms in our district and be integrated with existing data currently in use.
- Implement systems that best address the needs of the district.
- Implement a personnel system.
- Implement a Substitute Processing System.
- Implement a Labor Affairs System.
- Implement a Teacher Service Reconciliation and Control System.
- Implement a Position Control Sub-system.
- Implement an Employee Recruitment Sub-System.

Financial Management
Enhance the financial management system to ensure that it is used productively by all administrators in the district.

Strategies:
- Continue to implement the Financial Information System.
- Continue to implement the Budget Development Sub-System.
- Continue to implement a Cash Management Sub-System.

Student Information Management
Enhance the existing Student Information System to more effectively assist central, area and school site personnel.

Strategies:
- Continue to implement a Student Information System (SIS).
- Enhance the Adult Education Student Information Sub-System.
- Implement the Student Academic Analysis Sub-System.
- Enhance the Bus Transportation Sub-System.
- Continue to implement and enhance the Special Education Sub-System.
- Enhance the Grade Reporting Sub-System.
- Continue to implement the Student Attendance Sub-System.
- Enhance the Code of Conduct Sub-System.
- Continue to implement the Student Scheduling Sub-System.
- Continue to implement the Bilingual Information Sub-System.

Procurement Management
Implement an inventory and procurement system that is robust enough to handle the needs of a large corporation yet user friendly enough for non-technical professionals to use productively.

Strategies:
- Locate an inventory and purchasing system that can be implemented on existing district platforms and be integrated with currently used data.
- Continue to enhance the Accounts Payable System.
- Continue to enhance the Inventory Control System.
- Continue to implement the Purchasing Sub-System.
- Continue to implement the Food Service Sub-System.
- Continue to implement the Work Order Sub-System.

Other Management Systems
Provide a comprehensive system which will facilitate office procedures across the district and community.

Strategies:
- Continue to implement and merge the Office Sub-System.
- Implement a Community Use of Schools Sub-System.
- Implement a Board Office Information Sub-System.
- Implement a Systems Project Control Sub-System.

Standards, Guidelines And Models

Objective:

To establish a set of educational, technical, engineering and architectural guidelines that adhere to nationally and locally established requirements for the equitable implementation of:

- Facility improvements for the accommodation of Technology
  (Electrical, Security, Furnishing, Environment, Safety)
- Integration into established core curriculum standards
  (Language Arts, Math, Science, Social Sciences, Voc-Tech)
- Instructional and Administrative Technology
  (Hardware, Software, Cabling Topology)
- Policies for acquisition, deployment & implementation of current technologies
- Procedures for establishment of user support & professional development

Recommendations:

Network Infrastructure

Create and implement a plan to add, consolidate and migrate to a common network topology that supports voice data and video.

Strategies:

- Publish and disseminate standards to principals and offices.
- Determine the "Standards" by which technology plan implementation will adhere.
- Define the lowest level of computer that will be supported on the school and district network.
- Select a vendor to establish a network that adheres to district and industry standards; and connects multiple platforms.
- Tie the payment of vendors to the successful implementation and system acceptance by the user.
- Begin to wire all schools and classrooms based on the Educational Technology Plan network infrastructure design.
- Monitor technical compliance of installations.
- Adhere to the "Procedures for Purchase of Computers, Computer Services and Related Services" guidelines.
- Adopt network management software standards.
- Adopt procedures for troubleshooting problems with the network.
- Adopt environmental standards for technical equipment e.g., communication closets.
- Perform regular inspections of the network infrastructure, certifying to industry standards.

Models
Establish technology models for instructional and administrative uses including classrooms, labs, libraries, administrative sites and offices.

Strategies:
- Publish and disseminate the models.
- Update models based on current technologies.
- Assess schools' status in relationship to the basic model.
- Install networked teaching/administrative multimedia control station for each classroom.
- Begin implementation of the basic School Model in phase one.
- Continue implementation of the basic School Model in phase two.
- Complete implementation of the basic School Model in phase three.
- Assess schools' needs for technologies for individuals with special needs.
- Create lending centers whereby staff and parents can obtain technology for use at school and/or home.
- Establish a state of art district broadcast studio.
- Use the Technology Planning Guide to develop school technology plans.

Facilities
Insure that all DPS facilities are modified to receive the necessary infrastructure to support the implementation of technology.

Strategies:
- Publish and disseminate a facilities standard document that speaks to the following issues:
  - ⇒ Power supply and regularity.
  - ⇒ Environmental and security needs.
  - ⇒ Implement semi-annual inspections of technology infrastructure of each facility.
  - ⇒ Deploy maintenance teams capable of making repairs to a facility's infrastructure.

Security
Install the necessary tools and devices to insure the security and integrity of the districts' data.

Strategies:
- Evaluate, choose and install security products on all DPS workstations and computers that prohibit unwanted and inappropriate information.
- Install authorization and authentication software on the Interment network access servers.
- Conduct PR campaign within the district to convey the importance of protecting district data.
- Install anti-virus software on all district workstations.
- Monitor the network regularly to detect hackers.

Measurement & Assessment

Objectives:

To provide measurement criteria related to the use of instructional and administrative technology.

To provide assessment tools to monitor the effectiveness of technology and evaluate the effectiveness of implementing the Educational Technology Plan.

Recommendations:

Measurement

Design assessment programs to measure the implementation of the district technology plan including staff training, school progress and administrative systems.

Strategies:

- Monitor district attainment of the actions set forth in the Educational Technology Plan.
- Conduct regular assessments of administrative systems (questionnaires, interviews, telephone polls). Modify systems based on results of assessments.
- Assist schools in assessing their attainment of school improvement plan objectives for technology.
- Identify objectives for staff training sessions.
- Design assessment instruments to assess staff training outcomes.
- Administer assessment instruments to assess staff training outcomes.
- Modify professional development programs based on results.

Assessment

Design assessment programs that differentiate between the curricular content of the program and the technology portion.

Strategies:

- Identify grade-specific technology benchmark indicators that all students must attain for grades 3, 6 and 9.
- Design assessment instruments to assess students' attainment of grade specific technology benchmark indicators.
- Administer assessment instruments to assess students' attainment of grade specific benchmark indicators.
- Refine curricular offerings and instructional delivery systems based on results.
- Identify grade specific objectives for grades 1,2,4,5,7,8. These objectives support attainment of the benchmark indicators at grades 3,6,9.
- Design programs to assure that students in grades 10, 11, and 12 maintain State-of-the-Art knowledge and graduate with skills required for success in college and the world of work.

Marketing The Plan

Objective:

To design and implement an effective public, district-wide, and continuing campaign to persuade all stakeholders to embrace the Educational Technology Plan.

Recommendations:

Develop a Marketing Plan to promote the implementation of the Educational Technology Plan.

Strategies:

- Hold District-wide technology conference/fair during school day and evening to publicize and inform stakeholders about the Plan.
- Form "working committee" to implement marketing strategies.
- Deliver Board presentation explaining the plan.
- Solicit assistance from staff, students, parents and community for each implementation phase of the Plan.
- Maximize opportunities to promote the Educational Technology Plan at Board meetings, committee meetings, local school staff meetings, area staff meetings, parent organization meetings by presenting and explaining the plan.

- Develop activities to market the plan:
  - ⇒ Use videos, posters, storyboards, essays, buttons, bumper stickers, etc. for staff and students .
  - ⇒ Conduct student assemblies and other special events.
  - ⇒ Disseminate student designed products at special events

Utilize various public relations communication vehicles and media.

- Urge unions to publish positive news re: Plan in the Unions' newsletters.
- Air radio/television announcements.
- Send press releases to local newspapers.
- Advertise using DPSNet.
- Publicize Plan in "Double Click" tabloid.

- Demonstrate direct relationships between the implementation of the plan, success in the market place and readiness for employability.
- Involve business partners and industry to promote and market the plan.

VI. INSTRUCTIONAL AND ADMINISTRATIVE TECHNOLOGY

A. Computer and Network Infrastructure
B. Instructional Systems
C. Administrative Systems

A. COMPUTER AND NETWORK INFRASTRUCTURE

Infrastructure Overview

The Detroit Public Schools' technology plan is built on a network infrastructure. The network infrastructure is a system of major communication lines connecting schools and other locations to one of three concentration points located in strategic geographic areas within the district. These three concentration points are connected to one another through high speed communication lines in a city-wide loop. This loop forms the communication backbone tying all of the voice, data and video systems together.

Each school and administrative location will be attached to this backbone through communication lines and an intelligent router. A sub-network will exist within each school and administrative site consisting of a communications closet which will include a building file server, a concentrator and multiplexor in each room. This will allow for up to 35 networked workstations per classroom. From these workstations, any user will be able to access any instructional or administrative application in the district.

Instructional And Administrative Models

The school of the future will have the latest technology for instructional and administrative use. Each student and staff member will use technology to access information and communicate electronically with the global community; parents, government, universities, and the business sector. Staff and students will have the ability to receive educational programming through cable and satellite. Staff will have the ability to access necessary administrative information for financial, procurement, human resource, and student information management.

Classrooms will have five networked student work stations and enough ports for a full class enabling additional workstations or laptops to be dynamically added onto the network.

Each classroom will also contain a networked teacher workstation for instructional and administrative purposes. This station will have large group instruction capabilities using video, voice and data. All of the technology in the classroom will be electronically connected with a central hub or file server. An electronic network will be established at each school for staff and students to receive and send data to other schools or sites.

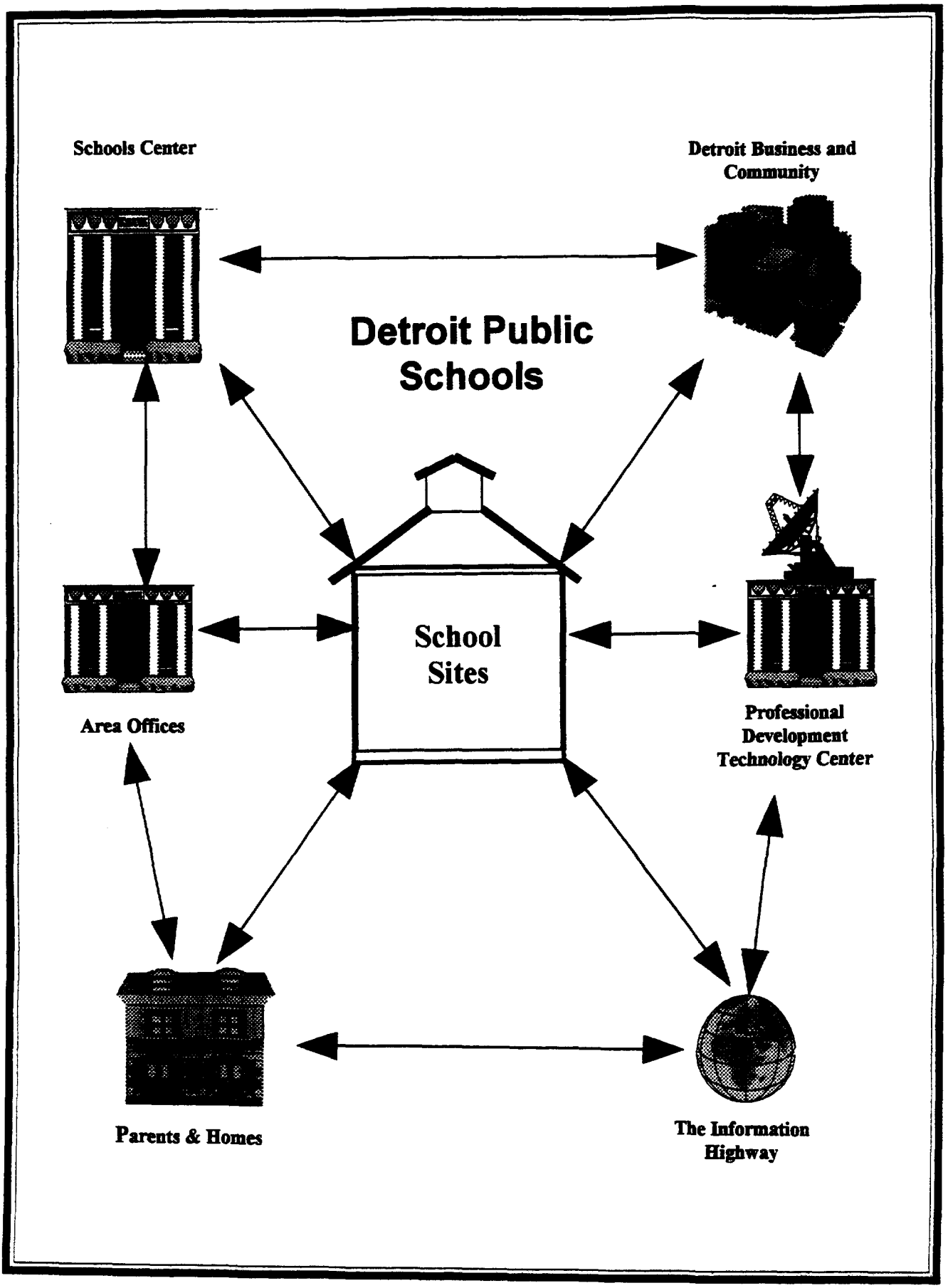
The library media center will have workstations for students to use during lunch, study halls or open periods. The center will also have extra ports for students and staff who need to attach a laptop to the network. Students and staff will have access to an on-line "card catalog" that is connected to everyone in the school or district. Other areas will be available to students and staff for on-line research, composition, and multimedia coordination.

Computer classrooms will be established in each school building consisting of enough stations to accommodate a full class of students. The purpose of the computer classroom is to teach the current computer curriculum.

Each school will have a central distribution system to broadcast live or tape video to each classroom. A downlink satellite dish will be connected to the distribution system. The satellite will provide instruction, staff development, interactive conferences and electronic field trips.

Each school administrative site will be equipped with a workstation and other technologies. Additionally, departmental offices and the main office will have networked workstations; and, printer, fax and phone capabilities.

There are certain technologies and software that will be available to students and staff on a school-wide basis. In some cases these technologies will be borrowed from school lending pools. In the areas of software, students and staff will have access to district approved curriculum; and, subject specific publishing, productivity, instructional and administrative management software. Parents and community will be able to borrow technologies from Community Technology Resource Centers that will be established at each school site and area offices.


Schools Center
Detroit Business and Community
Detroit Public Schools
School Sites
Area Offices
Professional Development Technology Center
Parents & Homes
The Information Highway

School Model Specifics

Other School Districts

Detroit Businesses and Community

Classroom

5 Networked Stations
1 Networked Teaching and Administrative station
- multimedia control station
- projection device for VCR, TV, video and data, screen capability of CD-ROM, satellite, cable connections

High Quality printer
Video Distribution System
Access to internet, admin. network, software, subject specific technologies, dial-tone, Security, furniture
1:1 student:port ratio

Library Media Center

5 network ports
3-6 Circulation stations
10-20 Networked stations
- online catalog
- online research
- cd-rom

2-3 Printers, fax, copier
VCR, Laserdisk, CD-ROM
2-3 Barcode readers
Color scanner

Departmental Office

3 Networked Stations
1 Networked Station per administrative office site
High Quality printer
integrated fax
phone and phone lines

Computer Classrooms

35 Networked Stations
1 Networked Teaching / Administrative
- multimedia control station
- projection device for VCR, TV, video and data, screen capability of CD-ROM, satellite, cable connections

High Quality b/w printer
Television and VCR
multi-disciplinary cross-curriculum software
furniture, appropriate security

Area Offices

Main Office

1 Networked station per desk
Fax
Phone lines
High quality printer

Community Technology Lending Center (Areas & Schools)

Laptop Computers
Software: Courseware & CD-ROMs
Camcorders

School Wide Technology

Specialized technologies	CATV connection	Color scanner
Adaptive devices	Laptop lending pool	Label makers
Digital video camera	Laminator machines	File servers
Large volume, collating copier	Binding machines	

Access to district approved curriculum subject specific, publishing, teacher productivity, instructional and student management software.

Two-way video interactive communication between schools and within schools

Home

Schools Center

School Wide Technology

Technology will be used by all school staff and students for instructional purposes. File Servers will be strategically placed and configured to handle the capacity and performance needs of the school. There will be access to District approved curriculum, subject specific software, publishing software, teacher productivity software, instructional and student management software. Laptops and other school wide technology will be available for lending by staff and students. Two-way video interactive communications will be established between schools and within schools. School wide technology will include the following:

- Specialized Technologies/Adaptive Devices
- Digital Video Camera
- Camcorders
- Large Volume Collating Copier
- CATV Connection
- File Servers
- Access To District Approved Software
- Two-Way Video Interactive Communication
- Laptop Lending Pool For Staff And Students
    - 60 laptops for schools with less than 750 students
    - 120 laptops for schools with between 750 and 1500 students
    - 180 laptops for schools with greater than 1500 students
- Laminator Machines
- Binding Machines, Label Makers, And A Color Scanner





	Phase 1	Phase 2	Phase 3
Implementation			
Costs		$57,240,000	






Library/ Media Center

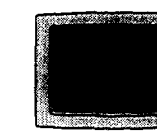
The library media center will be a place where students and staff may obtain information for research, professional development and personal growth. The resources of the library media center may be accessed from remote locations within the school including classrooms, computer labs and departmental and main offices. Teachers will have the option of bringing students to the library media center for projects where books, magazines and other hardcopy materials are desired. The library media center will include a central distribution station permitting staff and students to use video for learning and instruction. The following technologies will be located in the library media center:

	Elementary:	Middle:	High School:
• Circulation Stations	(3)	(4)	(6)
• Networked Research Stations	(10)	(15)	(20)
• High Quality Printer	(2)	(2)	(3)
• Bar Code Readers	(2)	(3)	(3)

- Access To Internet
- On-Line Catalog
- On-Line Research
- CD ROM
- 1 Teaching /Administrative Multimedia Control Station
- Projection Device For VCR, TV, Video And Data Screen
- Capability Of CD-ROM, Satellite, Cable Connections
- Fax
- CD-ROM Server
- Video Distribution System
- Color Capable Scanner
- Copier
- 5 Networked Ports
- Distance Learning







	Phase 1	Phase 2	Phase 3
Implementation			
Costs		$11,440,000	$11,352,000

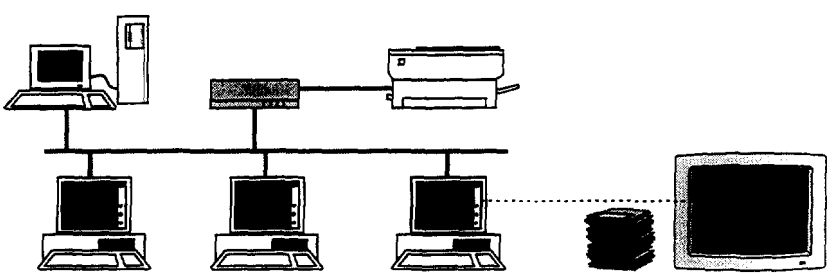




Classroom-All Levels

Classrooms will have five networked student work stations and enough ports for a full class enabling additional workstations or laptops to be dynamically added onto the network. It will also include a networked teacher workstation for instructional and administrative purposes. This station will have large group instruction capabilities using video, voice and data. The classroom of the future will include the following technologies:

- 5 Networked Student Multimedia Stations
- 1 Teaching / Administrative Multimedia Control Station
- Projection Device For VCR, TV, Video And Data
- Large Screen
- Capability Of CD-ROM, Satellite, Cable Connections
- Television And VCR
- 1 High Quality B/W Printer
- 1 Color Printer
- Video Player With Barcode
- Subject Specific Technologies (Graphing Calculator, Language Masters)
- Classroom Networked With A 1:1 Port: Student Via Multiplexors
- On Demand Access To Dial-Tone (Telephone, Modem, Fax)
- Access To Internet
- Access To District-wide Network And Administrative And Curriculum Software
- Ergonomic Furniture
- Appropriate Security

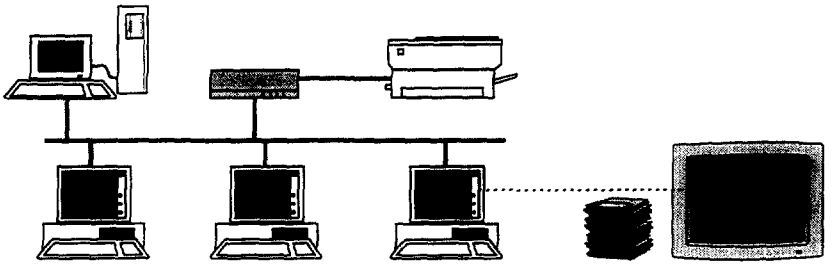


	Phase 1	Phase 2	Phase 3
Implementation Costs	$85,870,000	$67,360,000	$67,360,000

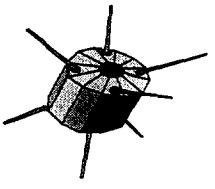
Computer Classrooms

The computer curriculum will be taught in a specialized classroom equipped with enough student workstations to accommodate a full class of students. The computer classroom will include the following technologies:

- To Teach Whole Class Size Computer Curriculum: (Elementary, Middle Or High School)
- 35 Networked Stations
- 1 Teaching / Administrative Multimedia Control Station
- Projection Device For VCR, TV, Video And Data Screen
- Capability Of CD-ROM, Satellite, Cable Connections
- Television And VCR
- 1 High Quality B/W Printer
- Ergonomic Furniture
- Appropriate Security



	Phase 1	Phase 2	Phase 3
Implementation			
Costs		$15,444,000	$15,252,200



Offices

Each school, area and district administrative site will be equipped with a workstation and other technologies. Additionally, school site departmental offices and the main office will have networked workstations; and, printer, fax and phone capabilities. Office sites will include the following technologies:

School Sites:

Guidance, Principals, Department Head, Teachers' Prep. Area

- 1 Networked Station Per Administrative Office Site
- Integrated Fax
- Phone Lines
- High Quality Printer

Departmental Office (For Administrative Head And Teacher Use):

- 3 Networked Stations
- Integrated Fax
- Phone Lines

Main Office:

- 1 Networked Station Per Desk
- Fax
- Phone Lines
- High Quality Printer

District/Area:

Office Desk:

- 1 Networked Station
- Integrated Fax
- Access To Phone Lines, Modem
- High Quality Printer

Administrative Department Areas Or Sites:

- Stand Alone Fax
- Copier
- Subject Specific Technologies For Curriculum Offices
- (Graphing Calculator, Language Masters)
- Specific Technologies For Administrative Offices
- (Optical Scanners, Tape Drives)
- Two-Way Video Interactive Communication
- High Quality Printer
- Hand Held Barcode Scanners/Software (To Manage Textbook Inventory)

	Phase 1	Phase 2	Phase 3
Implementation Costs	$4,085,400	$4,085,400	$4,085,400

Community Technology Lending Centers (Areas and Schools)

Parents and community will be able to borrow technologies from Community Technology Lending Centers which will be established at each school site and area office.

- Laptop Computers
- Software:
  - Courseware
  - CD-ROMs
- Camcorders

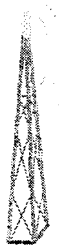




	Phase 1	Phase 2	Phase 3
Implementation			
Costs	$8,215,000		

Professional Development Technology Center

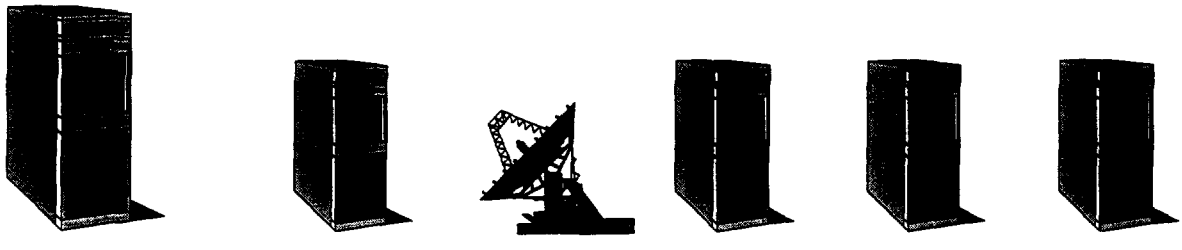
- Broadcast Studio
- Radio, TV And Telecast

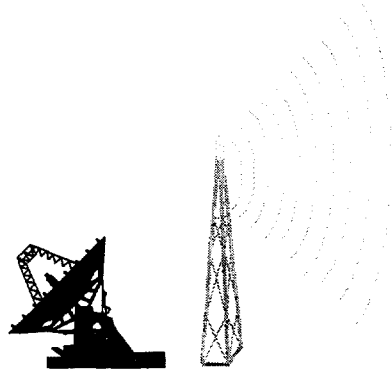
	Phase 1	Phase 2	Phase 3
Implementation			
Costs		$1,200,000	

District Technology

- Microwave Dish
- District Wide Optical System
- District Wide Student/Personnel Identification
- Distance Learning Studio
- Mainframe Upgrade
    - Student Information System Upgrade
    - Library System Upgrade
    - Test / Development System Upgrade
    - Area System Software Upgrades or Relocations



	Phase 1	Phase 2	Phase 3
Implementation			
Costs	$2,030,000		



B. INSTRUCTIONAL SYSTEMS

Instructional Systems are those software and procedures which are used as tool to improve the academic performance of Detroit Public Schools students Such software and procedures are used in the classroom, media center, school labs and even at home. Also included in this category are those tools used by teachers to monitor and assess student performance. Instructional System can be divided into four areas:

- Interactive Learning Systems
- Instructional Management Systems
- Information Retrieval Systems
- General Purpose Computer Tools

Interactive Learning Systems

Interactive learning tools are computer programs and presentation tools which allow the learner to interact with the computer to acquire information, learn concepts and improving thinking skills. Such programs range from single purpose computer aided instruction programs to sophisticated file server based programs which handle many curriculum areas and cover many grades. The more sophisticated programs can sense frustration and adapt the material to suit the learner or increase the pace or complexity of the material as they sense mastery on the part of the student.

Instructional Management Systems

Instructional management tools are computer programs designed for the teacher and administrator and not the student. These programs monitor what each individual student is learning, diagnose areas in which the student is experiencing difficulties and prescribe remediation. Instructional management programs individualize education by recognizing the strengths and weaknesses of individual students. Instructional management systems can be used to match the learning of each student to the core curriculum , MEAP and the MAT.

The Detroit Public Schools is piloting the Abacus Instructional Management System.

Information Retrieval Systems

Data retrieval systems allow students and staff to retrieve information rapidly and structure it in ways that are useful for analysis. This information is scattered all over the world on computers connected to the huge information network known as the Internet. Skills in data retrieval will soon replace the ability to memorize facts. Data retrieval also includes the ability to communicate with others in schools, across the country or around the world. "Electronic technology infrastructures have the potential to alter radically the range of information and resources that learners can access as well as what they can do with what they access." (NCREL policy brief)

The Detroit Public Schools has a window on the information highway know as DPSNet. Connection to our home page can be obtained through HTTP://dpsnet.detpub.k12.mi.us. Detroit Public Schools has a library system which schools can implement, known as DPSLib. These are the basic information retrieval tools recommended for school use.

Computer Tools

General purpose information tools are word processors, spreadsheets, databases, presentation tools and other specialized computer programs used by individuals to perform intellectual work. Success in the information age will require an understanding of these tools and the ability to adapt to new tools as they are developed.

Standard Tools for the Detroit Public Schools are:

Microsoft Word - word processor
Microsoft Excel - spreadsheet
Claris FileMaker Pro - database
Borland Paradox - database
Aldus Persuasion - presentation tool
Aldus PageMaker - desktop publishing

Word processors supported include WordPerfect and Works. Spreadsheets supported include Lotus.

The school of the future will:

- use interactive instructional materials that attend to individual learning styles;
- allow the instructor to automate the delivery of content;
- provide automated pre and post testing for instructional activities;
- provide remedial tools for assisting students with their developmental skills;
- enable the efficient management and integration of student, human resource, financial and procurement information; and,
- access and share information from and around the world.

C. ADMINISTRATIVE SYSTEMS

Administrative Systems are those computer systems that support the day to day operation of the school system. There are four core Administrative Systems. In addition, there is a fifth category of other systems designed and developed to meet the unique needs of the Detroit Public Schools.

Student Information Systems

Student Information Systems maintain data on current and former students in the Detroit Public Schools. Information from these systems is frequently used to provide services to students, such as transportation lists, class schedules, and grade reports. The information is also used to meet state and federal reporting requirements in various areas, such as special education and immunization compliance.

Financial Systems

Financial systems are those that maintain information on the Detroit Public Schools money matters. Budgets, ledgers, and many other financial reports are produced by these systems.

Procurement Systems

Procurement is the process of obtaining goods and services. DPS procurement systems automate these procurement activities, from the requesting for goods and services to the paying of vendors.

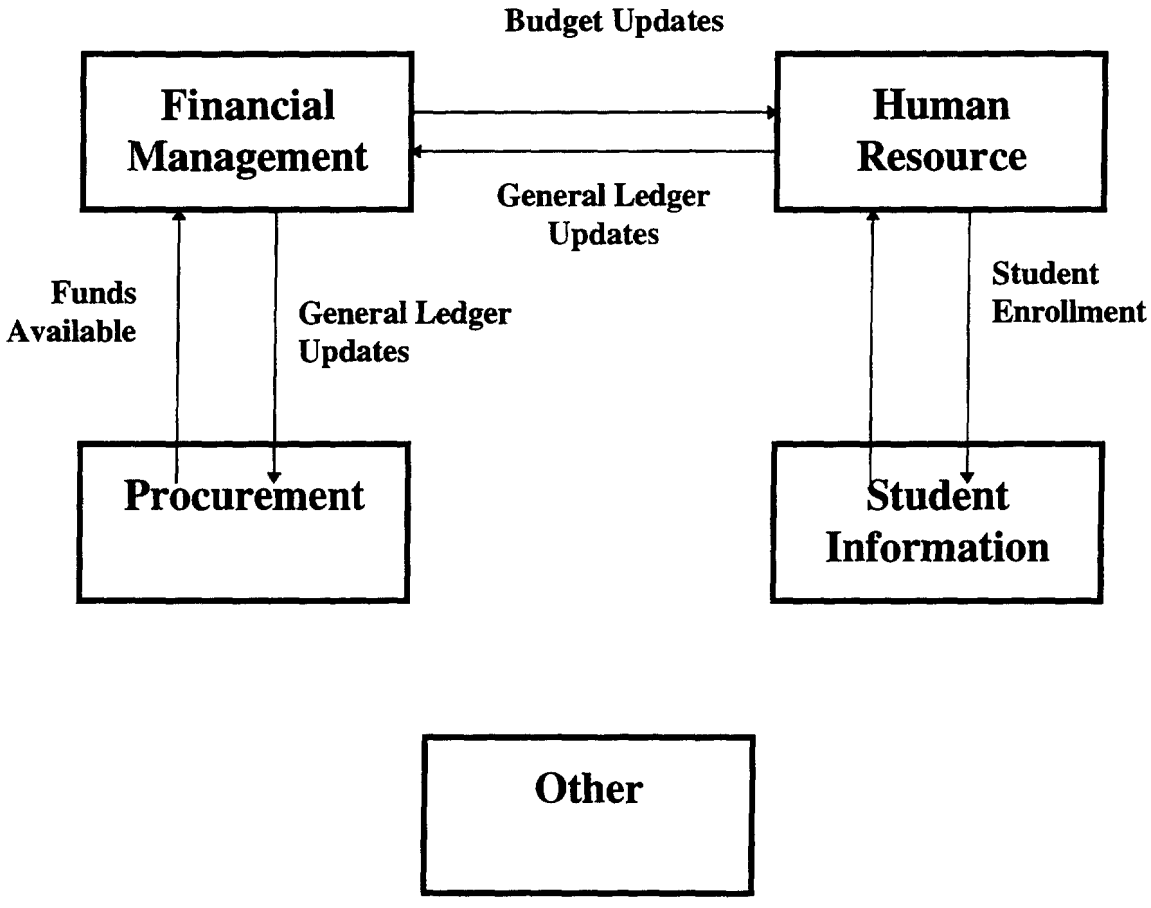
Human Resources

Systems in the human resources area maintain information on personnel employed by the Detroit Public Schools. Often this information is processed to provide service to the staff, such as printing employees' paychecks. Another major use is to track payroll expenditures by school, area and central offices.

Other Systems

This area includes a host of miscellaneous systems including those to support office automation. Included are activities such as word processing, data processing, electronic mail, desk management, graphics, image processing, and voice processing.

Detroit Public Schools
Administrative Systems



STUDENT INFORMATION SYSTEMS
Student Information Systems (SIS)

System Description

The Student Information System (SIS) maintains historical and current information (student profiles) on all students Pre-K-12 and Adult Education students who have attended or are attending the Detroit Public Schools. This system is the basic operations and demographic information system for students.

System Requirements

- Provide an integrated electronic document handling system for student 80 series record folders for K-12 and Adult Student including the existing microfilm applications, computer aided retrieval, and Optical Disk storage.

- Migrate historical student records from a microfilm process to a imaged process which makes them available to any authorized person with access to SIS and the proper security clearance.

- Increase the number of computing devices in the school which are connected to the SIS host, including computers in the classroom and counselors' offices. As computer technology is moved to the classroom, these devices should have access to SIS to enter attendance, grades and other student data. Bar code and magnetic stripe readers may be used for this process.

- Modify the immunization data entry and reporting process to allow for calculation of immunization compliance directly on the AS400 computer and the processing of State mandated reports.

- Create the capability to print a complete profile of a student from a single request. This profile would include grades, MEAP scores, CAT scores, MAT scores, attendance, code of conduct violations, free/reduced lunch information, endorsed diploma status, all historical academic achievement data, etc. The printed report would be produced promptly upon request and be formatted for easy use by school staff.

- Create a daily computer run which provides an exception report for student information data. For example, the report would list students with invalid addresses and students with incomplete information. The run would also compare active students by school with the prior day's count of active students and report significant deviations.

- Create a prescription for student's in need for an intervention strategy. This prescription would be based on a number of factors including grades, attendance, code violations, age relative to grade, etc.

- Create an historical archive of the entire Student Information System at the end of each semester. This file would be used for internal analysis and future information needs.

- Develop on-line access for students and parents to view their academic records.

- Create the District, Area and school level student attendance, grade point average, student retention, endorsed diploma and graduate rates reports directly from the AS400 computer. This data would then be immediately available for schools to review and available for downloading to a micro computer for desktop publishing of the District Objectives and other reports.